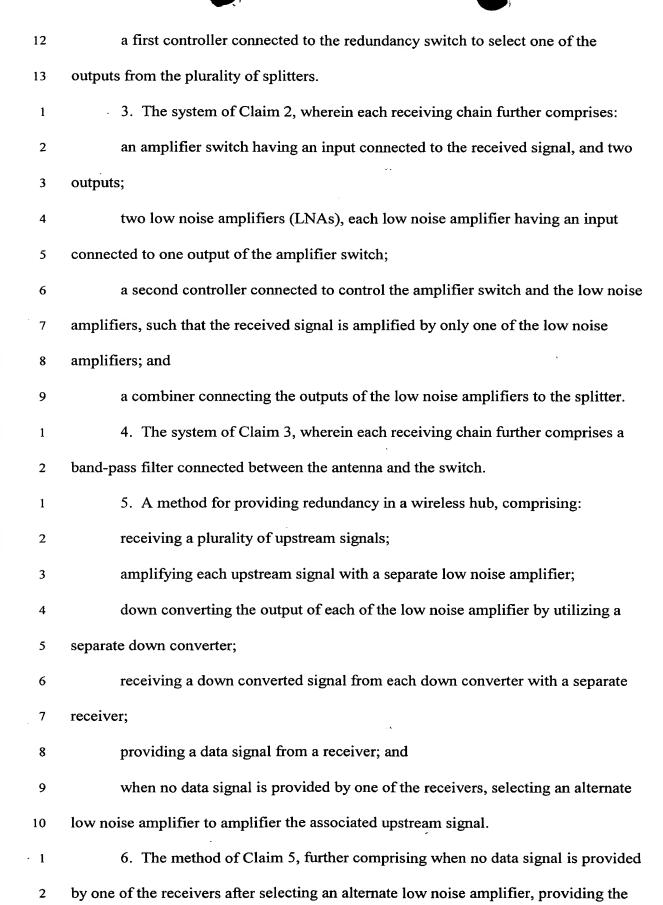
CLAIMS

What is claimed is:

1	1. A low noise amplifier redundancy system comprising:
2	an antenna receiving a received signal;
3	at least two low noise amplifiers (LNAs), each low noise amplifier comprising
4	a low noise amplifier input that receives the received signal and a low noise amplifier
5	output;
6	an switch having an input connected to the received signal, and at least two
7	outputs, each output connected to a separate low noise amplifier input;
8	a controller that controls the switch and the low noise amplifiers to select one
9	of the low noise amplifiers, such that the received signal is amplified by only one of
10	the low noise amplifiers; and
11	a combiner connecting the outputs of the low noise amplifiers to a single
12	signal line.
1	2. A redundant receiving system comprising:
2	a plurality of receiving chains, each comprising
3	a received signal;
4	a splitter having two outputs with each outputting the same received
5	input signal;
6	a down converter connected to one output of the splitter; and
7	an upstream receiver connected to the down converter;
8	a redundancy switch having a plurality of inputs, each input connected to a
9	splitter output from each receiving chain;
10	a back-up down converter connected to an output of the redundancy switch;
11	a back-up upstream receiver connected to the back-up down converter; and







4 converter, the redundant down converter providing a redundant down converted signal

output of the low noise amplifier associated with the receiver to a redundant down

5 to a redundant receiver.

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- 7. A method for providing redundancy in a wireless hub, comprising:
- 2 receiving a plurality of upstream signals;
- amplifying each upstream signal with a separate low noise amplifier;
- down converting the output of each of the low noise amplifier by utilizing a
- 5 separate down converter;
- receiving a down converted signal from each down converter with a separate
- 7 receiver;
- 8 providing a data signal from a receiver; and
- when no data signal is provided by one of the receivers, providing the output
- of the low noise amplifier associated with the receiver to a redundant down converter,
- the redundant down converter providing a redundant down converted signal to a
- 12 redundant receiver.
- 8. A low penetration receiving system comprising:
- a plurality of low noise amplifiers;
- a switch having a plurality of inputs, each input connected to one low noise
- 4 amplifier;

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- a down converter connected to an output of the switch; and
- an upstream receiver connected to the down converter;
- 7 wherein the down converter and receiver are time shared between signals
- 8 produced by each low noise amplifier.
 - 9. A low penetration receiving system with redundancy comprising:

2	a plurality of low noise amplifiers, each amplifier amplifying an
3	upstream signal;
4	a plurality of splitters, each splitter connected to an amplifier and
5	having a first output and a second output;
6	a first switch having a plurality of inputs, each input connected to a
7	distinct one of the first outputs of the plurality of splitters;
8	a second switch having a plurality of inputs, each input connected to a
9	distinct one of the second outputs of the plurality of splitters;
10	a first down converter connected to an output of the first switch;
11	a first upstream receiver connected to the first down converter;
12	a second down converter connected to an output of the second switch;
13	and
14	a second receiver connected to the second downconverter.
1	10. The system of Claim 9, further comprising a plurality of secondary low
2	noise amplifiers, wherein one secondary low noise amplifier is connected in parallel to
3	one of the plurality of low noise amplifiers.
1	11. A method for low penetration redundancy, the method comprising:
2	receiving a plurality of upstream signals;
3	amplifying each upstream signal with a separate low noise amplifier;
4	splitting each amplified signal into two signals;
5	down converting the output of each of the low noise amplifier with a single
6	down converter;
7	receiving a down converted signal from the down converter with a single
8	receiver;
9	time sharing the down converter and receiver during a low penetration period;

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providing a data signal from the receiver; and

when no data signal is provided by the receiver when receiving a signal from one of the low noise amplifiers, providing the output of the low noise amplifier to a redundant down converter, the redundant down converter providing a redundant down converted signal to a redundant receiver.